

## March 2022 Entry (Into the Dark Forest - Liu Cixin's 'Cosmic Sociology')

“The giant spacecraft, equal in volume to three of the largest seagoing carriers of the twenty-first century, was practically a small city, but it had no bridge or command module, or even a captain’s room or operations room. In fact, it had no specific functional compartments whatsoever. All of them were identical, regular spheres that differed only in size.

At any location inside the ship, you could just use a data glove to activate the holographic display, which due to the high cost, was a rarity even in Earth’s super-wired society. And at any location, so long as you had the appropriate system permissions, you could pull up a complete command console, including a captain’s interface, which effectively made the entire ship, even the passageways and bathrooms, a bridge, command module, captain’s room and operations room!” – [Liu Cixin, The Dark Forest](#) (2008).

I encountered Liu Cixin’s [Remembrance of Earth’s Past](#) trilogy for the first time recently by a video from [Quinn’s Ideas YouTube Channel](#) titled, “[The Ultimate Weapon of The Trisolarans | Three Body Problem Series](#),” and posted on March 6, 2022 and all quotes here are courtesy of Quinn’s video as I have not personally read the series but have read secondary sources describing the series in addition to viewing Quinn’s video.

The [trilogy](#) is a play in three acts, the first book, [The Three Body Problem](#) (2008), describes the various crisis that humanity goes through after discovering that a hostile alien warfleet is *en route* and will arrive in two centuries to exterminate humanity and furthermore that they have already attacked us in ways we can barely comprehend so as to retard human technological progress. Humanity nearly perishes from the frenzied fear, civilization collapses and then recovers, and going into the second book, [The Dark Forest](#) (2008), which is the crisis point, humanity has finally reached a level where it feels it can face the Trisolarian fleet. The final book, [Death’s End](#) (2010), resolves the series in truly cosmic scale with the last human survivors arriving at the end of the universe via hibernation and relativist time dilation, micro-universes and other gimmicks; as Quinn offers in the video, the scale of the series is enormous in a way that, as I pointed out in GGDM, is not compelling because it is simply beyond human comprehension: How compelling is it that [Andromeda Galaxy will “collide” with the Milky Way Galaxy](#) in 2.5 to 4 billion years?

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(on [stimmung](#))

“Pressure was in equilibrium inside and outside of a human body filled with deep-sea acceleration fluid, meaning it could sustain high pressures like a deep-sea fish. The environment of a liquid-filled cabin in a rapidly-accelerating spacecraft was like that of the deep sea, so the liquid was now being used to protect human bodies against the ultra-high acceleration of space travel. Hence the term, ‘deep sea state.’” – [Liu Cixin, The Dark Forest](#) (2008).

It is said that a fish is always drowning and never drowning. To move through space at any meaningful speed – in this case, 120g acceleration – humans had to learn to breathe deep-sea acceleration fluid. Humans had to learn to drown and not drown at the same

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time. There was no hint in Quinn’s video review that this involved genetic engineering of the type described in [Frederick Pohl’s “Day Million”](#) (1966), rather, it seemed to be a near-mystic discipline obtained by practice in the manner of the various disciplines described in [Frank Herbert’s Dune](#) (1965). In GGDM terms, this is a good example of the sort of idea that could be described in the Stimmung of a Stardrive Patent (see GGDM section [2 Stardrive](#)).

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(on ambushes hidden behind ideas)

“The probe was a perfect teardrop shape, round at the head and pointy at the tail, with a surface so smooth it was a total reflector. The Milky Way was reflected on its surface as a smooth pattern of light that gave the mercury droplet a pure beauty. Its droplet shape was so natural that observers imagined it in a liquid state, one for which an internal structure was impossible.” – [Liu Cixin, The Dark Forest](#) (2008).

“The UN and the fleets accelerated their preparations for negotiations, and the two internationals began organizing delegations. All of this took place in a day after the droplet was captured. But what excited people the most of all was not the facts before their eyes, but the rudimentary outline of a bright future: What sort of fantastic paradise would the Solar System become after the union of Trisolaran technology and human power?” – [Liu Cixin, The Dark Forest](#) (2008).

“The droplet wasn’t fragile like a tear. Entirely the opposite: Its strength was a hundred times greater than the sturdiest material in the Solar System. All known substances were fragile as paper by comparison. It could pass through the Earth like a bullet through cheese, without even the slightest harm to its surface.

“Then ... what’s it here for?” the lieutenant colonel blurted out.

‘Who knows? Maybe it really is just a messenger. But it’s here to give humanity a different message,’ Ding Yi said, turning his gaze away from the droplet.

‘What?’

‘If I destroy you, what business is it of yours?’” – [Liu Cixin, The Dark Forest](#) (2008).

In GGDM terms, this is approximately a [First Contact](#) situation between a Major Race Homeworld position (the Trisolarans) and a technologically-advanced near 1st Era Minor Race (Humanity), with a few science-fiction twists. The Trisolarans were alarmed to find a Minor Race so close to their homeworld and so close to becoming a 1st Era Major Race (all of this in GGDM terms). They found us before we found them, but in GGDM terms, since both had looked and found the other, there was little practical difference except that the Trisolarans were moving first and had advanced surveillance capabilities.

The humans who went to meet the ‘probe’ – presumably the most ‘enlightened’ of our species, officers, fleet scientists and diplomats – were mesmerized by its perfection and beauty and the language used to describe is clearly intended to convey that effect. Likewise, humanity was relieved and enthused by the idea that the Trisolarans might be like us, or might respect us enough to send an emissary instead of a warship. It was so

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beautiful and perfect they never suspected it was anything harmful until it destroyed the ship that had captured and docked it and accelerated toward the Earthfleet that had come out to meet it...

This is, as discussed in GGDM section [7 Combat](#), the science-fiction execution of an open-space Hannibal-esque ambush hidden behind ideas (paraphrasing [Lynn Montross](#)). Because it wasn't the facts before them that excited humanity, it was the ideas – in GGDM terms, the [Ideological and Symbolic Constructural Elements](#), perhaps in Kantian terms, the 'is and the ought' – behind which the ambush was hidden.

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(on ramming and tactical speed in GGDM Ship or Colony combat)

“After passing through *Infinite Frontier*, the droplet continued onward at a speed of thirty kilometers per second. In the space of three seconds it had crossed ninety kilometers passing first through *Yuanfang*, *Infinite Frontier*'s neighbor in the first row, and then through *Foghorn*, *Antarctica*, and *Ultimate*, leaving the hulls red-hot, as if the warships were giant lamps lined up.” – [Liu Cixin, The Dark Forest \(2008\)](#).

“By this time, fleet commanders were in a state of numb shock. For nearly two centuries, research into space strategy and tactics had dreamt up every possible kind of extreme battle condition, but witnessing a hundred warships blowing up like a string of firecrackers in under a minute was beyond what their minds could comprehend. The tide of information surging out of the battle information system meant they were forced to rely on the analysis and judgements of the computer battlefield decision-making system and focus their attention on detecting an invisible enemy that didn't even exist.” – [Liu Cixin, The Dark Forest \(2008\)](#).

“All battle monitoring capacity was directed into the distant regions of space, ignoring the danger right in front of them. A fair number of people even believed that the powerful invisible enemy might be a third-party alien force distinct from humanity and the Trisolarans, because in their subconscious minds, the Trisolarans remained the weaker, losing side.” – [Liu Cixin, The Dark Forest \(2008\)](#).

“Various scenarios for the Doomsday Battle had been concocted during two centuries of the study of space strategy, but in the minds of strategists, the enemy had always been big. Humanity would meet the main part of the mighty Trisolaran force on a space battlefield with every warship a fortress of death the size of a small city. They had imagined every extreme form of weapons and tactics the enemy could possibly possess, the most terrifying of which involved the Trisolaran fleet launching an attack using antimatter weapons, and obliterating a stellar class battleship with antimatter the size of a rifle bullet. But now the combined fleet had to face facts: Their only enemy was a tiny probe, one drop of water out of the enormous ocean of Trisolaran strength, and this probe attacked using one of the oldest and most primitive tactics known to human navies: ramming.” – [Liu Cixin, The Dark Forest \(2008\)](#).

“Its course took it smashing through debris that liquefied under impact, splashing away at high speed to collide with other debris and giving the droplet a brilliant tail. First it resembled a comet bristling with rage, but as the tail lengthened, it turned into a huge silver dragon that stretched ten thousand kilometers. The entire metallic cloud glowed

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with the dragon's light as it whipped to and fro in its mad dance. The warships penetrated by the dragon's head began to explode along its body, so that it was dotted with the nuclear explosions of four or five small suns at any given time. Further back, molten battleships became million-ton metallic magma explosions that dyed its tail a bewitching bloodred." – [Liu Cixin, The Dark Forest \(2008\)](#).

GGDM section [6 Combat](#) ("For the Babylon Bobs") discussed the concept of [ramming in ship combat](#) in space. GGDM, and most intelligent people who understand, takes a dim view of ship ramming in space combat in the classic sense seen in video science fiction (e.g. [Star Wars](#), [Babylon 5](#)), but I do have to admit that Mr. Cixin's description of the destruction of 1,000 city-sized Earth warships in just 13 minutes led me to rethink the issue: There is no indication that the probe is occupied by a biological crew, it seems to be a very advanced, intelligent drone of some sort. While AI warships are discussed in GGDM (and AI Scouts are discussed in First Contact), the two concepts of AI and ramming never quite come together in GGDM's main text like Mr. Cixin so ably described here.

Another issue to revisit is the discussion of tactical speed in ship combat. Thinking in terms of the amount of time that might be represented by a Regular Turn or Combat Round in GGDM (stretching the scale as Mr. Cixin also does), GGDM section [2 Movement](#) ("Interplanetary Movement") allows that in-system movement is instantaneous and that a ship in a starsystem may be considered at any time to be anywhere in the system for game purposes because of the amount of time that might be represented by a turn, and the advanced technology represented in the game.

From this I concluded and expressed in GGDM section [3 Combat](#) ("Go Speed Racer!") that differences in tactical speed were mostly generic in game terms unless the players could introduce elements into the game that could make substantial differences expressible in concrete game-mechanical terms. All of that is to say that Mr. Cixin here describes a situation where great tactical speed makes a huge difference because the human sensors and computers were too slow to track the movement of the probe and reached the incorrect conclusion regarding their attacker.

But is this really a tactical speed problem? No, the core technology is the teardrop, the super dense material it is made from, that makes the incredible speed count in combat. Anything less would have simply obliterated itself when it rammed the first ship! So, as in most science fiction, and as is also true of GGDM, the technology (in the form of the GGDM [Patent](#) interpretation) precedes concepts such as tactical speed.

So, Mr. Cixin's scene makes a case for ramming combat in space that does not involve dramatic self-sacrifice or even the loss of the ramming vessel, and secondarily, a case potentially for attaching more importance to tactical speed in GGDM combat. However, to achieve the [Trafalgar-like](#) phenomenal massacre of 1,000 lumbering city-sized Earth warships in 13 minutes by ramming, the Earth ships were very *unrealistically presented* as being in a stationary formation of three lines, like [set-up dominos](#) – almost reminiscent of the pilot episode of the original [Battlestar Galactica](#) in 1978. Mr. Cixin's devise of three lines of close-order warships is perhaps an example of taking literary liberties to the point of destroying [suspension of disbelief](#) to make a point; he wanted to

tell the reader that humans create orderly lines and no matter what, the cosmos will destroy them?

Stationary and/or linear formations are certainly not the assumption in GGDM combat formations and are only rarely seen even in the worst video sci-fi, for example, the success of the “Starflower” beast mode in [The Last Starfighter](#) (1984) required the enemy fighters to be seen approaching in a [close order line formation](#).

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(on Mr. Cixin’s Cosmic Sociology)

“I have seen the grand march of hunger. Millions of people fleeing famine on the great plains through sand that blocked out the sky. Hot sky, hot earth and hot sun. When they died, they were divided up on the spot.... It was hell on Earth. There are tons of videos to watch if you want.” – Liu Cixin, *The Dark Forest* (2008).

Liu Cixin, like [H.P. Lovecraft](#), is first and foremost a literary figure, and his works are filled with literary [allusions](#), [symbols](#), [metaphors](#) and [allegory](#) – for example, the perfect cosmic teardrop that becomes the raging unstoppable [celestial dragon](#) that destroyed the human fleet in 13 minutes. All of his words and literary devices are directed to a point he wants to make and by extrapolation, his interpretation of the world that is foisted upon his willing readers and future generations of uncultured school students who may be required to read the works for a grade. The vision he provides is of a crowded, brutish interstellar jungle teeming with intelligent, willful, hostile alien races possessing advanced technology who preemptively seek to [exterminate](#) all competitors, especially minor races, with all survivors eventually retreating to perfect [paradise](#) micro-universes of their own making to wait for the end of the cosmic cycle. I mention Lovecraft here because Mr. Cixin’s Remembrance of Earth Past seems to have roots in Lovecraft [Cosmicism](#) (not to be confused with Russian [Cosmism](#)), but the alien races are much more science fiction and practical for the story he wanted to tell than Lovecraftian entities would have been.

“Ye Wenjie proposes two axioms of cosmic sociology: ‘First: Survival is the primary need of civilization. Second: Civilization continuously grows and expands, but the total matter of the universe remains constant.’” – from Wikipedia article, “[Remembrance of Earth’s Past](#).”

This is foreshadowed during the Crisis Era by the collapse of human civilization and the widespread [barbarism](#) and [human cannibalism](#) that follows, and in the second and third book is extended to the galaxy and universe as a whole. The only deterrent is [mutually-assured destruction](#) (M.A.D.) – the humans obtained [détente](#) by threatening to broadcast the location of the Trisolaran homeworld to all of the other races in the universe but by doing so, they would also expose their own position and the two species would face annihilation in a hostile universe. This in fact, the humans did do; a weapon is useless if you not willing to pull the trigger even if it means your own demise and that pretty much assures that M.A.D. will eventually happen, because someone is going to call a bluff. Humanity on Earth and the Trisolarians of [Alpha Centauri](#) both perished alone in the universe.

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Ye Wenjie's Second Axiom parallels what I learned in Real Estate class in business college: The amount of land on Earth is finite (and will shrink if the sea level rises) while the human population keeps expanding; thus real estate will continuously rise in value as there is less and less land for each person (as a general matter, barring any of the special circumstances you might imagine). Similarly the [Paleolithic](#) nature of interstellar settings was noted in GGDM section [6 Diplomacy](#) ("Interstellar Paleolithic Culture") (as well as comparing far-flung colonies to [Polynesian Island cultures](#) in GGDM section [4 Expansion](#)) and however much the Paleolithic world of our ancestors might resemble the interstellar setting created by Mr. Cixin, [Joseph Tainter](#) noted in an appearance on [Peak Prosperity](#) (June 26, 2017) that [conflict avoidance](#) by [migration to other unoccupied areas](#) is the first response and that wars only happened when there were too many people and nowhere to migrate without coming into conflict with people already living there. So Mr. Cixin's cosmos teaming with hostile intelligent aggressive and technologically-advanced aliens is something beyond the merely Paleolithic (and it reminds me of the [Cosmic Encounter](#) and [Chaosmos](#) board games).

But we must also note that despite all, when the world became crowded and the wars began, somehow something [emergent](#) came from the process, and as I argued in GGDM section [4 Order](#) ("Hegemonic Empires"): that is the paradox of humanity. But that does not seem to be an assumption or Earth-history parallel Mr. Cixin allowed in his story setting – that Humanity and Trisolarians would combine for survival and something emergent in interstellar culture would come of it; such would be contrary to the brutish, M.A.D. point Mr. Cixin was trying to make.

By Charles W. Phillips